

REMARKS/ARGUMENTS

Claims 34-55, 66-69, and 83-87 are pending. Claims 37, 38, 47, 50, 54, 55, and 66-69 are withdrawn pursuant to the restriction requirement. Claims 34 and 39 have been amended. No new matter has been introduced. Applicants believe the claims comply with 35 U.S.C. § 112.

Claim 39-46, 48, 49, 51-53 and 85-87 are rejected under 35 U.S.C. 102(e) as being anticipated by Schemmel et al. (US 6,504,948 B1).

Applicants respectfully submit that independent claim 39 as amended is novel and patentable over Schemmel et al. because, for instance, Schemmel et al. does not teach or suggest storing a defect candidate in a memory with an expanded view of the defect candidate, and displaying on a second screen the expanded view of the defect candidate stored in the memory, responsive to a selection of the indication on the first screen. This is shown and described, for instance, in Figures 5-6 and at page 10, line 21 to page 11, line 22; and Figure 13 and at page 15, line 30 to page 16, line 9.

In contrast, Schemmel et al. discloses that requiring and placing the entire input image of the silicon wafer 16 into a first buffer, and placing the search area portions of the silicon wafer into a second buffer. The computer 32 uses the information in the first and second buffers to create alignment offsets, which is then used to align the test image. The properly aligned test image is then compared to the previously acquired image in the calibration phase 92, and a thresholded-minus-difference image is obtained. There is no teaching in Schemmel et al. of storing a defect candidate in a memory with an expanded view of the defect candidate, and displaying on a second screen the expanded view of the defect candidate stored in the memory, responsive to a selection of the indication on the first screen.

For at least the above reasons, claim 39, and claims 40-46, 48, 49, 51-53, and 85-87 depending therefrom, are patentable.

Claim 34, 35, 83, 84 are rejected under 35 U.S.C. 102(b) as being anticipated by Lam (US 5,043,663).

Applicants respectfully submit that independent claim 34 as amended is novel and patentable over Lam because, for instance, Lam does not teach or suggest using the first standard to select defect candidate image indications to store in a memory, and changing the graphical display in response to the change of the second standard by applying the second standard to the defect candidate image indications selected by the first standard and stored in the memory.

In the specific embodiment shown in Figure 5, defect candidates are extracted from images of a specimen by applying a first threshold (which are relatively low level) in the Defect Detection Processing Unit 410. Then the defect candidate images are stored in the Defect Image Memory 432 of the Defect Image Processing Unit 430. In this Defect Image Processing Unit 430, second and third thresholds are applied to the defect candidate images stored in the Defect Image Memory 432 to determine a suitable threshold level to detect true defects with less false defects.

In contrast, Lam merely discloses displaying a threshold line 54 which may be set or altered according to the particular needs of the customer. Lam fails to teach using the first standard to select defect candidate image indications to store in a memory, and changing the graphical display in response to the change of the second standard by applying the second standard to the defect candidate image indications selected by the first standard and stored in the memory.

In view of the foregoing, claim 34, and claims 35, 83, and 84 depending therefrom, are patentable.

Claims 34 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Noguchi et al. (US 6,411,377 B1) and Lam (US 5,043,663). The examiner alleges that Noguchi et al. discloses all the elements of claims 34 and 36 except graphically displaying a relation between defect density and threshold in which the first standard is indicated and changing the graphic display in response to the change to the second standard. The examiner cites Lam for providing the disclosure missing in Noguchi et al.

Applicants note that Noguchi et al. also fails to teach using the first standard to select defect candidate image indications to store in a memory, and changing the graphical display in response to the change of the second standard by applying the second standard to the defect candidate image indications selected by the first standard and stored in the memory. Noguchi et al. merely discloses displaying a screen for selecting one of a variety of modes, allowing the user to specify a threshold value, and allowing the magnification m1 for setting the threshold value to be increased or decreased. See column 45, lines 40-50; and column 48, lines 25-46.

For at least the above reasons, claims 34 and 36 are patentable over Noguchi et al. and Lam.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,



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